



## 1 SKYKEEPER®

# AMAN-DMAN-SMAN

### Benefits of SkyKeeper® AMAN-DMAN-SMAN

- Increase capacity
- Reduce Workload
- Maintain safety
- Intuitive decision support tool

*“The solution provided ATCOs with a dynamic tool to permit a constant and precise use of the full RWY capacity by optimizing the sequence of traffic flows (ARR and DEP) using AI algorithms.”*

**Daniela Steiner**  
– skyguide

### Increase predictability, reduce delays, maximize capacity.

The Air Travel Industry is on a steep incline with the number of air passengers continuously growing, runways and airports are increasingly busy and Air Traffic Controllers (ATCOs) are under a lot of pressure to manage arriving and departing flights. Many international airports are congested, translating into delays and considerable environmental impacts. In order to absorb the growth of traffic, increasing runway capacity at airports is achieved through better flow management.

Arrival Manager, Departure Manager and Surface Manager (AMAN-DMAN-SMAN) are sequencing tools leveraging on advanced trajectory predictions to optimize runway throughput. It enables ATCOs to improve their situational awareness and to anticipate flow of traffic. In mixed mode runway configuration, the coupled AMAN-DMAN allows for optimization of the arrival and departure sequence.

SkyKeeper® Coupled AMAN-DMAN was used in skyguide’s simulation exercises in the SESAR PJ02 EARTH project. The exercises enabled the team to conclude that the solution brought considerable improvements to the mixed mode single runway traffic at GVA Airport by reducing taxi time, cutting down noise and fuel consumption, and decreasing ATCOs mental stress.



### REDUCE WORKLOAD AND STRESS

Reduced mental stress and workload with reliable decision-making tools providing accurate sequences ahead of time. ATCOs can anticipate traffic flow with a 90 minute visibility window on arrivals and departures, as well as integrated sequences for mixed mode runways.

### MAINTAIN HIGH SAFETY LEVELS

Increase runway throughput whilst maintaining high safety levels with Artificial Intelligence optimized sequences that take into account standards, flight priority management and smart rules for departure uncertainties, and respects ATFM measures.

### ACHIEVE SMOOTHER TRAFFIC FLOW

Advanced algorithms provide advice such as holding, speed, level, route or heading changes to support ATCOs in their decision making. Based on user best practices, the tool is intuitive and adaptable to the needs of ATCOs.

### OPTIMIZE TRAFFIC SEQUENCES

Optimize runway operations with real-time KPIs to monitor traffic and identify opportunities for improvement. The Smart What-If tool allows ATCOs to probe a variety of situations, such as a drop of capacity, runway configuration changes, alternative separation times and more to analyze and minimize the impact on actual and forecasted airport traffic.

Limit environmental impacts by cutting out unnecessary fuel consumption and noise when holding arrival flights or having departing flights queue.

### ABOUT INNOV'ATM

Innov'ATM is an innovative technology company based in Toulouse, founded in 2014 and a subsidiary of Groupe ADP since 2018.

Counting on 30 highly skilled engineers and our ATI expertise we help Air Transport Operators with the most effective, efficient, sustainable, shared and agreed decision making technology solutions, through artificial intelligence and machine learning.



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